



MOTOROLA
intelligence everywhere™

ASTRO® XTS™ 2500

Model III

Digital Portable Radio

END-USER TRAINING



MSU REBANDING PROJECT

WELCOME TO XTS2500 III TRAINING!



INSTRUCTORS: RICH CARROLL
BOB GRESS

CLASS LENGTH: ABOUT 1.5 HOURS

OBJECTIVES:

- 1) FAMILIARIZE YOU WITH THE OPERATION OF YOUR NEW RADIO
- 2) EXCHANGE RADIOS AND ACCESSORIES



BEFORE WE BEGIN...



1. PLEASE DO NOT ASSEMBLE YOUR RADIO KIT YET.
LET'S DO IT TOGETHER.
2. LET'S TRY TO STAY TOGETHER AS WE GO THROUGH
EACH STEP. THAT WAY WE CAN HELP EACH OTHER,
GROUP QUESTIONS AND MAY FINISH EARLY.
3. THANKS!

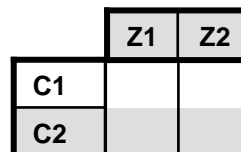




THE TRAINING SECTIONS



**Important Safety
Information**



Talk Group Map



Status Symbols



Status Alert Tones



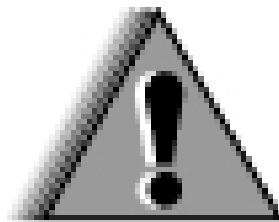
**Installation and
Removal**



**Operating Your
Radio**



THE TRAINING SECTIONS



**Important Safety
Information**



ELECTROMAGNETIC (RF) EXPOSURE



- ✓ **THE BIOLOGICAL EFFECTS OF RF ENERGY HAVE BEEN STUDIED FOR YEARS. THERE ARE SOME CONFLICTING RESULTS, BUT WE KNOW SOME THINGS.**
- ✓ **RF ENERGY CAN CAUSE HEATING (MICROWAVE OVEN).**
- ✓ **THE EYES AND HEAD ARE MOST SENSITIVE. STRONG RF FIELDS CAN CAUSE CATARACTS.**
- ✓ **THERE IS NO CONCLUSIVE EVIDENCE THAT RF EXPOSURE CAUSES CANCER - BRAIN OR OTHERWISE.**



ELECTROMAGNETIC (RF) EXPOSURE



- ✓ YOUR NEW RADIO TRANSMITS MUCH MORE POWER THAN YOUR CELL PHONE (2.3W VERSUS 1W OR LESS).
- ✓ THE FCC HAS REGULATED AND LIMITED THE AMOUNT OF PERMISSIBLE OCCUPATIONAL RF EXPOSURE.
- ✓ RF EXPOSURE DEPENDS UPON TWO VARIABLES.
 - 1) INTENSITY OF THE ELECTROMAGNETIC FIELD.
 - 2) TIME SPENT IN THAT FIELD.
- ✓ REDUCE EITHER ONE OF THESE AND YOU REDUCE YOUR EXPOSURE.



ELECTROMAGNETIC (RF) EXPOSURE



REDUCE RF INTENSITY BY NOT CLOSE TALKING YOUR RADIO.



Motorola recommends holding your radio 2" from your lips.



ELECTROMAGNETIC (RF) EXPOSURE



REDUCE RF INTENSITY BY NOT CLOSE TALKING YOUR RADIO.



The XTS2500 radios have very sensitive and clear audio.

We recommend holding your radio 6" from your lips.

Our tests show this cuts the intensity to your eyes and head to one-half the level when held at 2".



ELECTROMAGNETIC (RF) EXPOSURE



REDUCE TIME IN THE RF FIELD BY USING SHORT, INFREQUENT TRANSMISSIONS.



Especially avoid lengthy phone conversations.



EXPLOSIVE/ FLAMMABLE ATMOSPHERES



- ✓ **YOUR XTS2500 PORTABLE RADIO IS NOT INTRINSICALLY SAFE. NEITHER WAS YOUR LTS2000.**
- ✓ **DO NOT TRANSMIT OR OPERATE IF YOU ARE IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE. THE SWITCHES IN YOUR RADIO MAY PRODUCE MINUTE SPARKS WHICH COULD IGNITE THE ATMOSPHERE SURROUNDING YOU.**
- ✓ **DO NOT CHANGE BATTERIES IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE.**



FOR MORE SAFETY INFORMATION



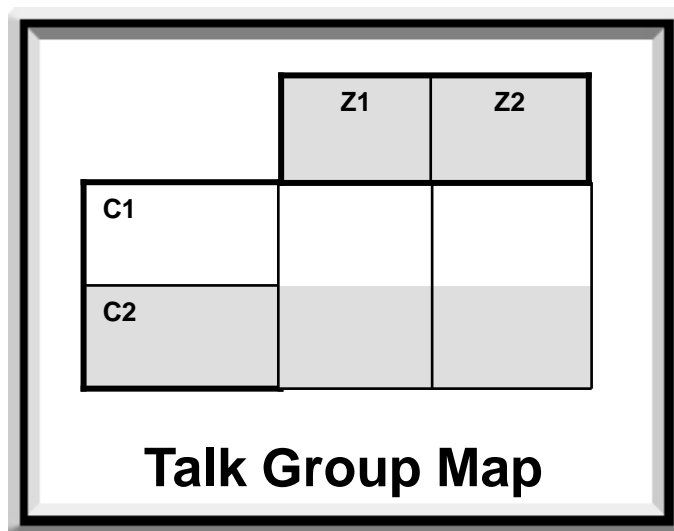
See the XTS2500 safety manual on our website.

Go to: www.telecom.msu.edu.

Click: Support; Training; Two-Way Radio, and then
Motorola XTS2500



THE TRAINING SECTIONS



Talk Group Map – TELECOM SYSTEMS



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	VOICE	M DISASTR			
CH3	EVENT 3	BROADBAND	MSU/DPPS			
CH4	EVENT 4	JOB TG 1				
CH5	EVENT 5	JOB TG 2				
CH6	EVENT 6	JOB TG 3				
CH7		JOB TG 4				
CH8		CENT CNTL				



Talk Group Map – ATS



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	ATS- 1	M DISASTR			
CH3	EVENT 3	ATS- 2	MSU/DPPS			
CH4	EVENT 4	ATS- 3				
CH5	EVENT 5	ATS- 4				
CH6	EVENT 6	JOB ATS MEDIA				
CH7		JOB ATS COMP				
CH8						



Talk Group Map – CYCLOTRON



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	CYCLO 1	M DISASTR			
CH3	EVENT 3	CYCLO 2	MSU/DPPS			
CH4	EVENT 4	JOB CYCLO				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – PP MATERIAL/ LOGISTICS



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	MATLOG 1	M DISASTR			
CH3	EVENT 3	MATLOG 2	MSU/DPPS			
CH4	EVENT 4	JOB TG 1				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – HOUSING COMPUTER GROUP



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	HS COMP 1	M DISASTR			
CH3	EVENT 3	HS COMP 2	MSU/DPPS			
CH4	EVENT 4	JOB HS CO 1				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – HOUSING CONSTRUCTION GROUP



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	HS CONT 1	M DISASTR			
CH3	EVENT 3	HS CONT 2	MSU/DPPS			
CH4	EVENT 4	JOB HS CO				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – BRESLIN



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	BRESLIN	M DISASTR			
CH3	EVENT 3		MSU/DPPS			
CH4	EVENT 4					
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – PROJECTS & CONTRACTS (PIA)



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	SUPER PIA	M DISASTR			
CH3	EVENT 3	CENT CNTL	MSU/DPPS			
CH4	EVENT 4					
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – CENTRAL CONTROL



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	HVAC-CC 1	M DISASTR			
CH3	EVENT 3	HVAC-CC 2	MSU/DPPS			
CH4	EVENT 4	JOB HVAC				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – LANDSCAPE SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	L SCAPE 1	M DISASTR			
CH3	EVENT 3	L SCAPE 2	MSU/DPPS			
CH4	EVENT 4	CENT CNTL				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – TRANSPORTATION SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	AUTO 1	M DISASTR			
CH3	EVENT 3	AUTO 2	MSU/DPPS			
CH4	EVENT 4	JOB AUTO				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – SAFETY- SECURITY SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	SFTY SC1	M DISASTR			
CH3	EVENT 3	SFTY SC2	MSU/DPPS			
CH4	EVENT 4	JOB ELCTR				
CH5	EVENT 5	JOB ALRMS				
CH6	EVENT 6	JOB SCRTY				
CH7		CENT CNTL				
CH8						



Talk Group Map – ELEVATOR SHOP



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	ELEV 1	M DISASTR			
CH3	EVENT 3	ELEV 2	MSU/DPPS			
CH4	EVENT 4	JOB ELEV				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – KEY SHOP



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	KEY SHP 1	M DISASTR			
CH3	EVENT 3	KEY SHP 2	MSU/DPPS			
CH4	EVENT 4	JOB KEY				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – POWER & WATER



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	PWR PLT 1	M DISASTR			
CH3	EVENT 3	PWR PLT 2	MSU/DPPS			
CH4	EVENT 4	ELECT 1				
CH5	EVENT 5	ELECT 2				
CH6	EVENT 6	JOB TG 1				
CH7		CENT CNTL				
CH8						



Talk Group Map – ENGRG & ARCH SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	EAS 1	M DISASTR			
CH3	EVENT 3	EAS 2	MSU/DPPS			
CH4	EVENT 4	CENT CNTL				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – ROOFING SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	ROOFING 1	M DISASTR			
CH3	EVENT 3	ROOFING 2	MSU/DPPS			
CH4	EVENT 4	JOB ROOF				
CH5	EVENT 5	CENT CTRL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – GLASS - MASONRY SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	MASON	M DISASTR			
CH3	EVENT 3	GLASS	MSU/DPPS			
CH4	EVENT 4	JOB MASON				
CH5	EVENT 5	CENT CTRL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – SET UP SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	SET UP 1	M DISASTR			
CH3	EVENT 3	SET UP 2	MSU/DPPS			
CH4	EVENT 4	JOB SETUP				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – CARPENTRY SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	CARPEN 1	M DISASTR			
CH3	EVENT 3	CARPEN 2	MSU/DPPS			
CH4	EVENT 4	JOB TG 1				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – PAINT SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	PAINT 1	M DISASTR			
CH3	EVENT 3	PAINT 2	MSU/DPPS			
CH4	EVENT 4	JOB TG 1				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – PLUMBING SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	PLUMB 1	M DISASTR			
CH3	EVENT 3	PLUMB 2	MSU/DPPS			
CH4	EVENT 4	PLUMB 3				
CH5	EVENT 5	JOB PLUMB				
CH6	EVENT 6	CENT CNTL				
CH7						
CH8						



Talk Group Map – A&I SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	A & I - 1	M DISASTR			
CH3	EVENT 3	A & I - 2	MSU/DPPS			
CH4	EVENT 4	JOB A & I				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						



Talk Group Map – ELECTRICAL SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	ELECT 1	M DISASTR			
CH3	EVENT 3	ELECT 2	MSU/DPPS			
CH4	EVENT 4	PWR PLT 1				
CH5	EVENT 5	PWR PLT 2				
CH6	EVENT 6	JOB TG 1				
CH7		JOB TG 2				
CH8		CENT CNTL				



Talk Group Map – ENERGY SYSTEMS MECH A&I SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	ENERGY 1	M DISASTR			
CH3	EVENT 3	ENERGY 2	MSU/DPPS			
CH4	EVENT 4	JOB ENRGY				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6	STEAM 1				
CH7		PUMPS 1				
CH8		PM 1				
CH9		HVAC 1				



Talk Group Map – MECHANICAL SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	DISTBUT 1	M DISASTR			
CH3	EVENT 3	DISTBUT 2	MSU/DPPS			
CH4	EVENT 4	STEAM 1				
CH5	EVENT 5	STEAM 2				
CH6	EVENT 6	ABSORP 1				
CH7		ABSORP 2				
CH8		JOB DIS				
CH9		JOB STEAM				
CH10		JOB ABS				
CH11		CENT CNTL				



Talk Group Map – HVAC/ REFRIGERATION SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	HVAC 1	M DISASTR			
CH3	EVENT 3	HVAC 2	MSU/DPPS			
CH4	EVENT 4	REFRIG 1				
CH5	EVENT 5	REFRIG 2				
CH6	EVENT 6	JOB HVAC				
CH7		JOB REF				
CH8		CENT CNTL				
CH9						
CH10						
CH11						



Talk Group Map – METAL SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	SHTMTL 1	M DISASTR			
CH3	EVENT 3	SHTMTL 2	MSU/DPPS			
CH4	EVENT 4	PUMPS				
CH5	EVENT 5	BOILERS				
CH6	EVENT 6	INSUL				
CH7		JOB TG 1				
CH8		JOB TG 2				
CH9		CENT CNTL				
CH10						
CH11						



Talk Group Map – CUSTODIAL ZONES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	CUST ZONE	M DISASTR			
CH3	EVENT 3		MSU/DPPS			
CH4	EVENT 4					
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						
CH9						
CH10						
CH11						



Talk Group Map – COMMISSIONING SERVICES



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	COMMIS 1	M DISASTR			
CH3	EVENT 3	COMMIS 2	MSU/DPPS			
CH4	EVENT 4	JOB TG 1				
CH5	EVENT 5	CENT CNTL				
CH6	EVENT 6					
CH7						
CH8						
CH9						
CH10						
CH11						



Talk Group Map – RECYCLING/ WASTE MANAGEMENT



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	WASTE 1	M DISASTR			
CH3	EVENT 3	WASTE 2	MSU/DPPS			
CH4	EVENT 4					
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						
CH9						
CH10						
CH11						



Talk Group Map – LIGHTING PM CREW



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	PM CRW 1	M DISASTR			
CH3	EVENT 3	PM CRW 2	MSU/DPPS			
CH4	EVENT 4	JOB PM CR				
CH5	EVENT 5					
CH6	EVENT 6					
CH7						
CH8						
CH9						
CH10						
CH11						



Talk Group Map – STANDARD



	ZONE A	ZONE B	ZONE C			
CH1	EVENT 1	DISPATCH	P DISASTR			
CH2	EVENT 2	TALKGROUP 1	M DISASTR			
CH3	EVENT 3	TALKGROUP 2	MSU/DPPS			
CH4	EVENT 4	JOB TALKGRP				
CH5	EVENT 5	CENTRL CNTRL				
CH6	EVENT 6					
CH7						
CH8						



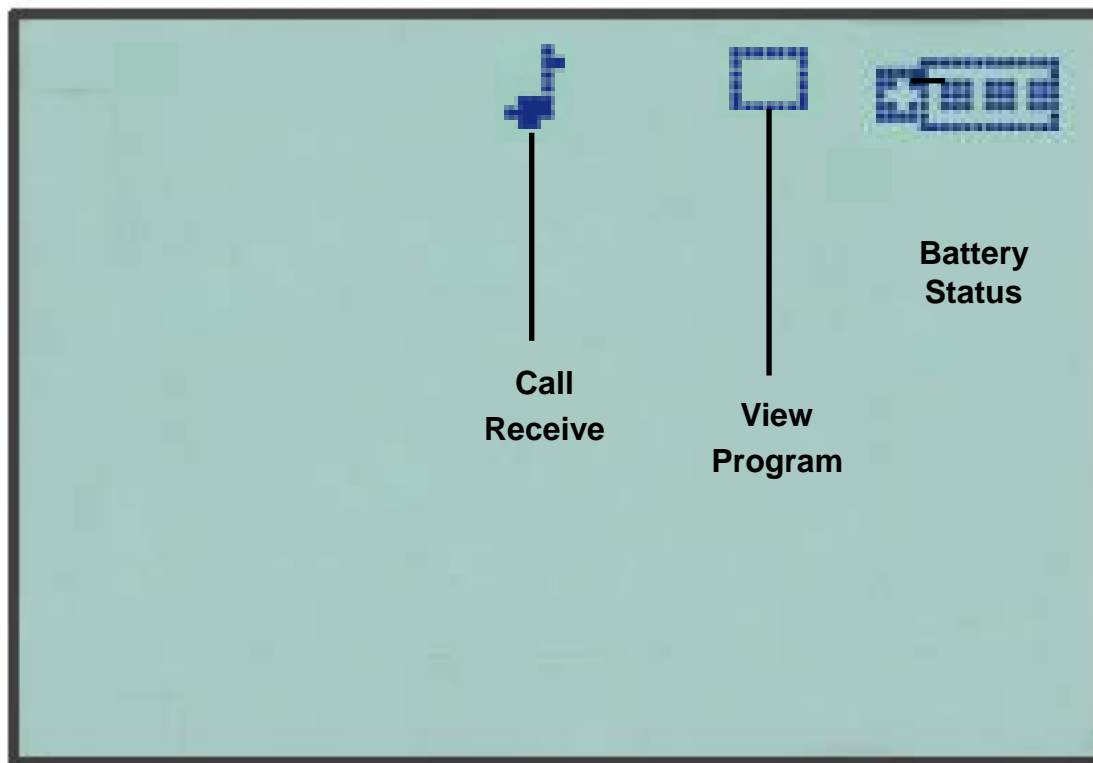
THE TRAINING SECTIONS



Status Symbols



Status Symbols – 1 of 2


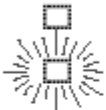




Continued...



Status Symbols – 2 of 2

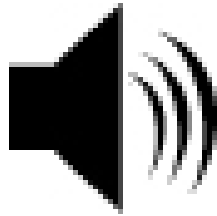


<i>Symbol</i>	<i>Indication</i>
	Call Received Flashes when an Individual Call is received.
	View/Program Mode The radio is in the view or program mode. <ul style="list-style-type: none">• On steady = view mode• Flashing = program mode
	Received Signal Strength Indication (RSSI) The received signal strength for the current site, for trunking only. The more stripes in the symbol, the stronger the signal.
	Battery <ul style="list-style-type: none">• Conventional = flashes when battery is low• Smart = the number of bars (0-3) shown indicates the charge remaining in your battery; flashes when battery is low

Not on our radios



THE TRAINING SECTIONS















Status Alert Tones



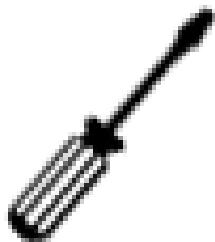
Status Alert Tones



Tone Name		Tone Information
Acknowledge		Receipt of a call sent to the central controller
Button Press		A valid key was pressed on the keypad
Call Alert		- Receipt of a Call Alert page sent to your radio - Confirmation receipt of a page received sent from your radio
Emergency		Emergency alarm was sent from your radio
Failsoft		Radio has lost communication with the central controller
Low Battery		Weak battery indication
No Acknowledge		A call to the central controller was not acknowledged
Out of Range		Radio is out of range of the system
Private Call I		Receipt of a Private Conversation call sent to your radio
Prohibit		Talkgroup or channel is not accessible
System Busy		Channel, system or target radio is busy
Time-out Timer		Time-out timer limit has been reached



THE TRAINING SECTIONS



Installation and Removal



Installation and Removal Procedures



Antenna



Battery



Universal Connector



Belt Clip



Antenna



To install the antenna:

1. Screw the antenna (clockwise) into the antenna receptacle on top of the radio.
2. Tighten the antenna firmly with your fingers.

To remove the antenna:

Unscrew the antenna (counter-clockwise) and remove it from the antenna receptacle on top of the radio.



Battery



To install the battery:

1. Turn the radio off.
2. Align the three tabs at the bottom of the battery with the three slots at the bottom of the back of the radio.
3. Angle the battery forward toward the radio until the battery clicks into place.

To remove the battery:

1. Turn the radio off.
2. Holding the radio in one hand, push down on the battery release slides on both sides of the battery with the other hand.
3. Angle the battery away from the radio and remove.



Universal Connector Cover



The universal connector cover protects the side connector near the antenna.

To remove the cover:

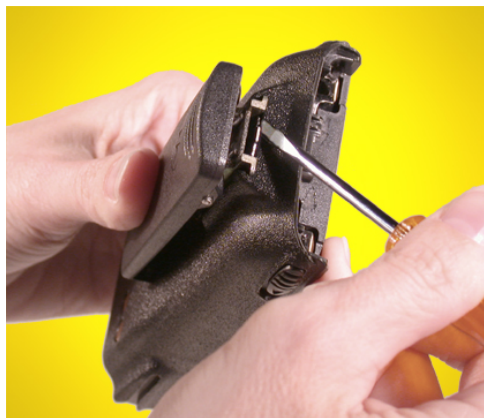
1. Turn the radio off.
2. Carefully insert a flat-bladed screwdriver between the bottom of the cover and the connector.
3. Holding the top of the cover with your thumb, push the screwdriver gently downward and lever the cover away from the radio.

To install the cover:

1. Turn the radio off.
2. Insert the hooked end of the cover into the slot above the connector.
3. Rub the ball of your thumb from the top to the bottom of the cover, applying pressure towards the radio. This will flex the cover and snap it into place.



Belt Clip



To install the belt clip:

1. Remove battery before installing or removing the belt clip.
2. Hold the battery with the back of the battery facing you.
3. Hold the belt clip with the top facing upward, and align the clip with the slots on the battery back.
4. Slide the belt clip downward into the slots until it clicks into place.

To remove the belt clip:

1. Pull away the metal tab at the top of the battery clip from the battery.
2. Slide the clip upward until it comes away from the radio.



Charging the Battery



The battery must be charged before use. Memory effect is a phenomenon that causes a loss in battery capacity or voltage due to repetitive shallow discharging or long-term overcharging. This memory effect has been greatly reduced in your batteries through the use of new cell technology. It is still recommended, however, that you discharge your battery as much as possible before recharging it (listen for the 'chirp'). Recharging after each shift is good standard practice, although if you only listen you may get up to three days before charging. When charging a battery that is attached to your radio, turn the radio off to ensure a full charge.

NOTE: We have given the battery installed in your radio its initial charge. You must charge the spare battery before use.

Continued...



Charging the Battery – More...



1. The Impres charger and battery are both smart; they talk to each other.
2. Don't try to charge your battery on a non-Impres charger.
3. The Impres battery has a preset number of charges it can accept. When that number is reached, the battery is deactivated and becomes a brick. Each full charge (charger LED on solid green) increments the counter and pushes it closer to 'brick' status. Even so, you should get 2.5-3 years out of your two batteries if you alternate them charging each every other day.
4. As you will see later, you can check the remaining capacity of your battery and the estimated number of charges it has had.



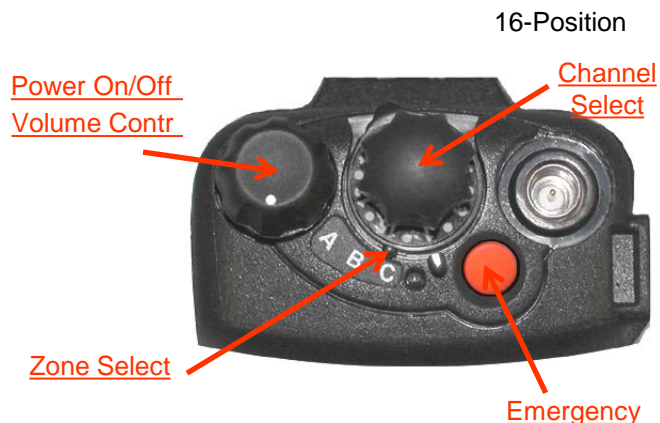
THE TRAINING SECTIONS



Operating Your Radio



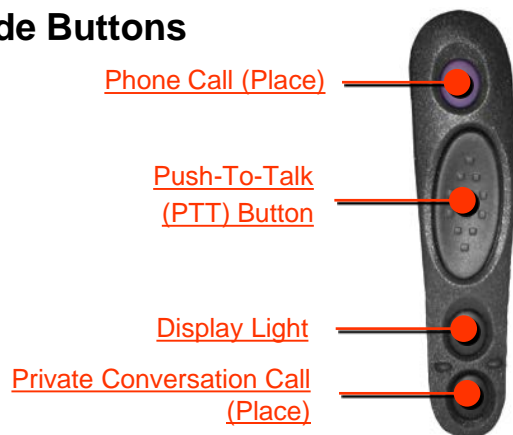
Your Radio



Call Alert Page (Respond)
Call Alert Page (Send)
Clock (Time and Date)
ID Number (View Your) Using CALL
ID Number (View Your) Using PAGE
Keypad Tones
List Name Edit
List Number Edit
List View
Smart Battery
Zone Select

Control Top

Side Buttons



Menu/Keypad Options



GENERAL FEATURES



LED Status



RED

- **Solid**
 - PTT is pressed; radio is transmitting
- **Flashing**
 - Channel Busy
 - Low Battery (lights while transmitting)



RED LED

GREEN

- **Solid**
 - Self-test being performed
- **Flashing**
 - Incoming Private Call



GREEN LED



Radio On/Off/Volume



On/Off/Volume
Knob



To turn the radio on:

Turn the On/Off/Volume Control knob clockwise.

*If the power-up test is successful, you briefly see **SELF TEST**, then the home display. If enabled, a power-up tone is also heard.*

*If the power-up test is unsuccessful, you see **ERROR XX/YY**. (XX/YY is an alphanumeric code.)*

To turn the radio off:

Turn the On/Off/Volume Control knob counter-clockwise until it clicks.



Zone Select (3-Position Concentric Switch)



Zone Name



Zone Select
Switch



To select a zone:

1. Select zone A, B, or C using the Zone Select switch.
2. Press the Home button to confirm the displayed zone and channel.



Channel (Talkgroup) Select (16-Position Select Knob)



Channel



Channel



To select a channel/talkgroup:

Turn the Channel Select knob to the desired position.

The new name will appear on the display.

If the channel you selected is unprogrammed, repeat the above step.

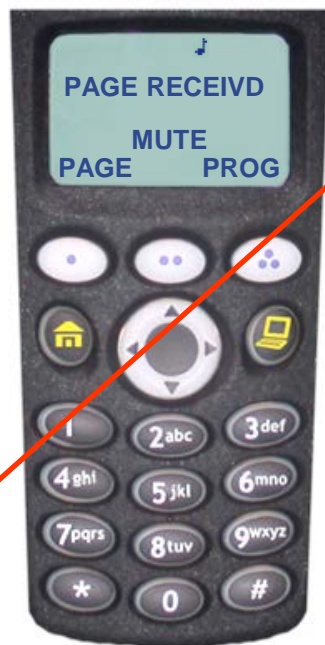
Note: a 'talkgroup' is a virtual 'channel'.




Call Alert Page – Acknowledge (Call Alert/Private Call)



LED



When a Call Alert page is received, you hear four repeating alert tones, the LED flashes green, the call received symbol () flashes and PAGE RECEIVD is displayed, followed by the name or ID of the calling person, followed by your home talkgroup each showing for about 2 seconds. This sequence will repeat until the call is answered.

PRESS PRIVATE CALL BUTTON TO ANSWER

Note: The radio that initiated the Call Alert page will receive a return acknowledgment when the Call Alert page is received.



Time-out Timer



***The time-out timer turns off your radio's transmitter.
The timer is set for 60 seconds.***

1. Hold down the PTT button longer than the programmed time.

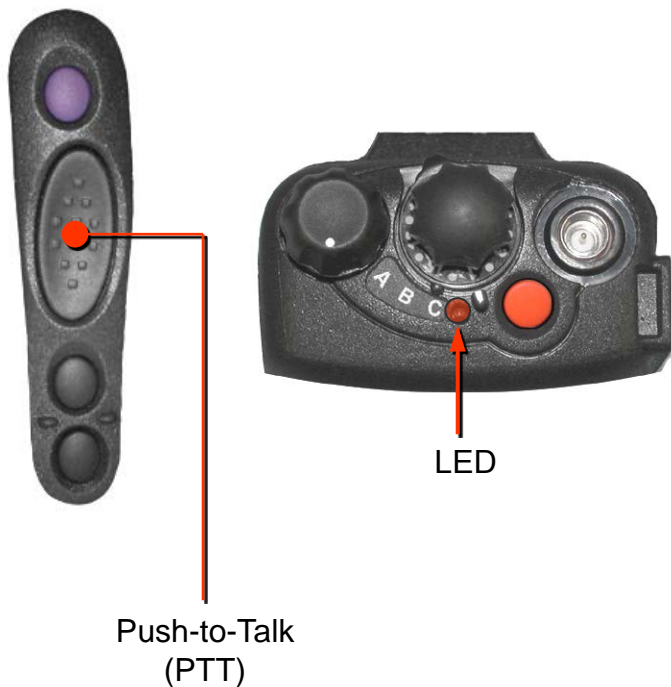
You will hear a low-pitched warning tone, the transmission will cut off, and the LED will go out until you release the PTT.



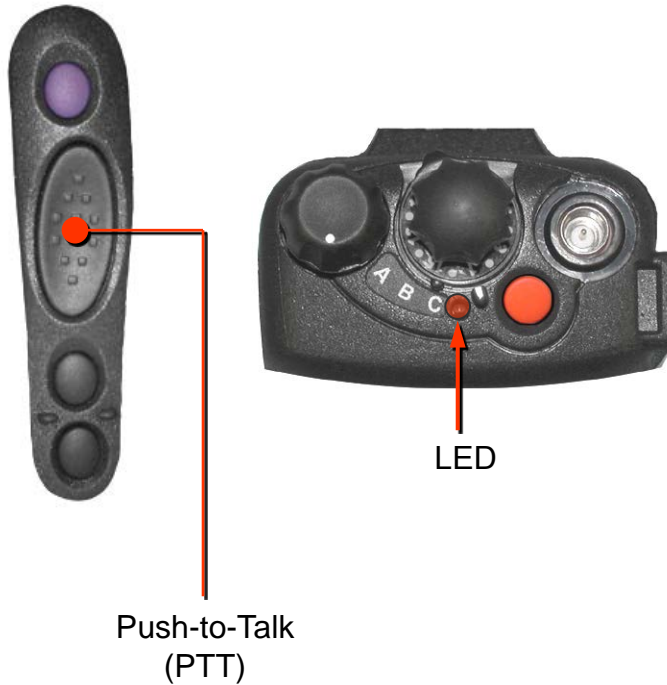
2. Release the PTT button.

3. Press the PTT button to re-transmit. The time-out timer restarts.

The timer will restart and the LED lights red.



Transmit and Receive



To transmit:

1. Select the desired zone/channel.
2. Listen for ongoing conversations; if the channel becomes clear, proceed with your call.
3. Press and hold the PTT button to transmit. The LED will light solid red. When speaking, keep the microphone 2-6" from your mouth.
4. Release the PTT button to receive (listen).



3-POSITION CONCENTRIC SWITCH



3-Position Concentric Switch (Zone)



ZONE SELECT (3-Position Concentric Switch)



ZONE SELECT



Select a ZONE:

1. Select a ZONE from the talkgroup map provided by your system administrator.
2. MOVE the CONCENTRIC switch to the predetermined position. (A,B,C)



TOP BUTTON



Emergency



Emergency – Send (Top Button) – 1 of 2



Emergency

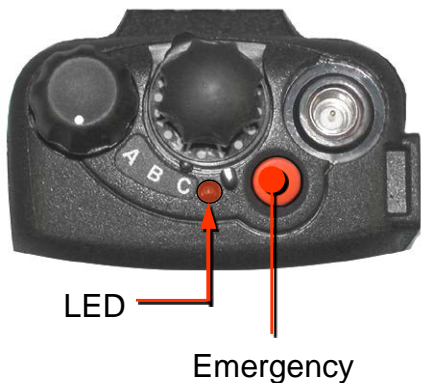


Send an
emergency alarm.

Send an
emergency call.



Emergency – Send Emergency Alarm/ Call (Top Button) – 2 of 2



To send an emergency alarm:

1. With the radio turned on, press the Emergency button.



The current zone/channel is displayed alternately with EMERGENCY, the LED lights red, and you hear a group of short, medium-pitched tones.

2. When you receive the dispatcher's acknowledgment, you see ACK RECEIVED, four tones sound, the alarm ends, and you may now talk to the dispatcher.
3. To exit emergency at any time, press and hold the Emergency button for about a second.

NOTE: RADIO WILL NOT TURN OFF IN EMERGENCY MODE.



TOP SIDE BUTTON



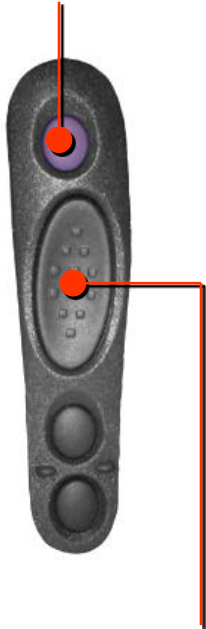
Phone



Phone Call – Place (Top Side Button) – 1 of 4



Phone Button



Push-to-Talk
(PTT)



There are three ways to place a phone call from your radio.

To place a phone call:

Select the
last phone
number dialed.



Select a phone
number from the
preprogrammed
phone list.



Select a
phone number by
using the keypad.



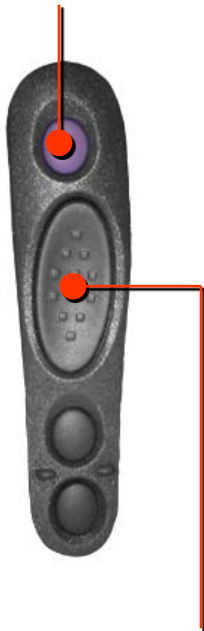
Note: Your radio functions as a campus phone.



Phone Call – Place Select Last Number Dialed (Top Side Button) – 2 of 4



Phone Button



Push-to-Talk
(PTT)



To select the last phone number dialed or received:

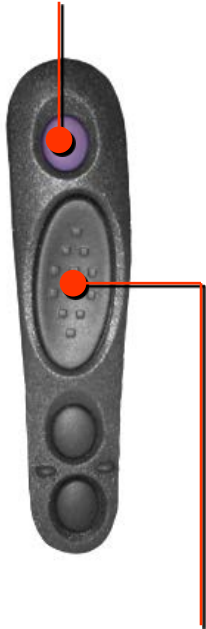
1. Press the Phone button. You will hear dial tone.
The last number dialed or received is displayed.
2. Press and release the PTT button to dial the displayed phone number.
The called phone number is momentarily displayed, then you see PLEASE WAIT. When you are connected, you see the called phone number again.
3. If your call is answered, press the PTT button to talk; release it to listen.
4. Press the Home button to hang up and return to the home display (or press the Phone button).



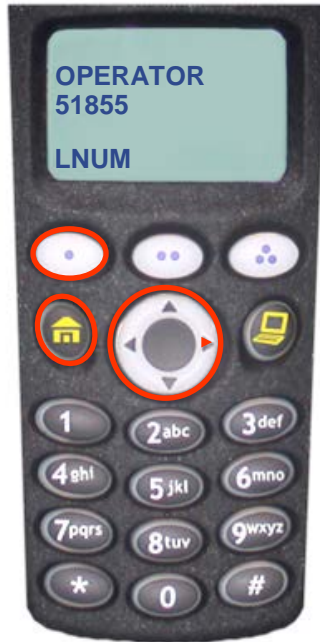
Phone Call – Place Select Number from Phone List (Top Side Button) – 3 of 4



Phone Button



Push-to-Talk
(PTT)



To select a phone number from the phone list:

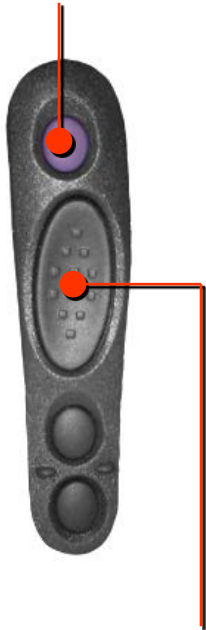
1. Press the Phone button. You will hear dial tone.
The last number dialed or received is displayed.
2. Press the right side of the 4-way Navigation button to find the phone number you want going through the list.
Note: Press the button directly below LNUM to go to the last number dialed.
3. Press and release the PTT button to dial the displayed phone number.
The called phone number is momentarily displayed, then you see PLEASE WAIT. When you are connected, you see the called phone number again.
4. If your call is answered, press the PTT button to talk; release it to listen.
5. Press the Home button to hang up and return to the home display (or press the Phone button).



Phone Call – Place Select Number Via Keypad (Top Side Button) – 4 of 4



Phone Button



Push-to-Talk
(PTT)



To select a phone number via the keypad:

1. Press the Phone button. You will hear dial tone.
The last number dialed or received is displayed.
2. Use the keypad to enter the phone number you want.
3. Press and release the PTT button to dial the displayed phone number.
The called phone number is momentarily displayed, then you see PLEASE WAIT. When you are connected, you see the called phone number again.
4. If your call is answered, press the PTT button to talk; release it to listen.
5. Press the Home button to hang up and return to the home display(or press the Phone button).

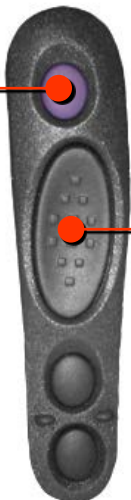


Phone Call – Respond (Top Side Button)




LED

Call Response
Button



Push-to-Talk
(PTT)



When a phone call is received, you hear a telephone-type ringing, the LED flashes green, the call received symbol () flashes and PHONE CALL is displayed, followed by your home talkgroup each showing for about 1 second. This sequence will repeat until the call is answered.

To respond to a phone call:

1. Press the Phone Call button
2. Press and hold the PTT button to talk; release it to listen.
3. Press the Home button to hang up and return to the home display (or press Phone button).



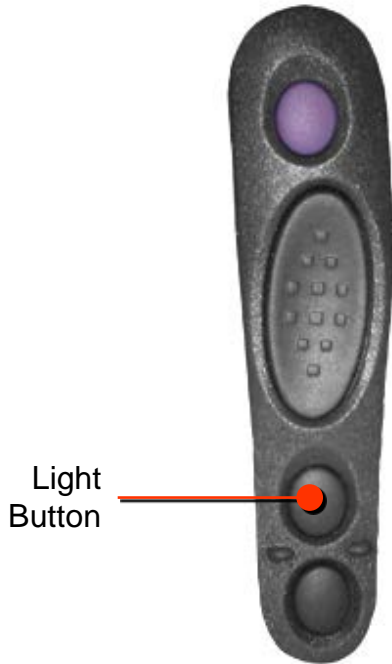
SIDE BUTTON 1



Display Light



Display Light (Side Button 1)



If poor light conditions make the display or keypad difficult to read:

Turn on the radio's backlights by pressing the Light button.

These lights will remain on for a preprogrammed time before they turn off automatically (15 seconds).

OR

You can turn them off immediately by pressing the Light button again.



SIDE BUTTON 2



Private Call



Private Conversation Call – Place (Side Button 2) – 1 of 4



There are three ways to place a Private Conversation call from your radio.

To place a Private Conversation call:



Select the last ID number dialed.



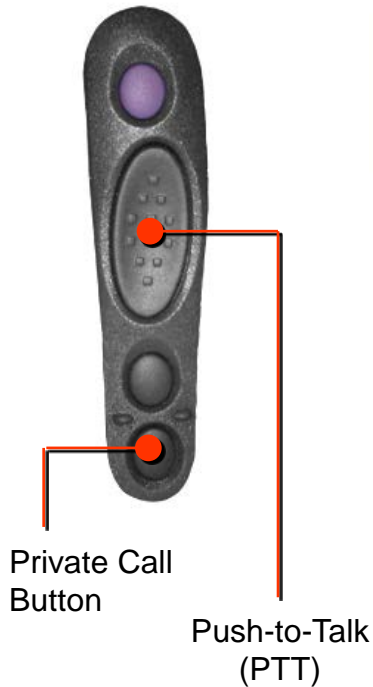
Select an ID number from the preprogrammed call list.



Select an ID number by using the keypad.



Private Conversation Call – Place Select Last Number Dialed (Side Button 2) – 2 of 4



To select the last ID number dialed or received:

1. Press the Private Call button.

The last number dialed or received is displayed.

2. Press and release the PTT button to start the Private Call.

The called ID is momentarily displayed, then you see PLEASE WAIT. When you are connected, you see the called ID again.

3. Press and hold the PTT button to talk; release it to listen.
4. Press the Home button or Private Call button to hang up and return to the home display. **If you forget to do this, a continuous alert tone will be heard.**



Private Conversation Call – Place Select Number from Call List (Side Button 2) – 3 of 4



To select an ID number from the call list:

1. Press the Private Call button.
2. Press the right side of the 4-way Navigation button to find the ID you want by going through the list.

Note: Press the button directly below LNUM to go to the last number dialed.

3. Press and release the PTT button to start the Private Call.

The called ID is momentarily displayed, then you see PLEASE WAIT. When you are connected, you see the called ID again.

4. Press and hold the PTT button to talk; release it to listen.
5. Press the Home button or Private Call Button to hang up and return to the home display.



Private Conversation Call – Place Select Number Via Keypad (Side Button 2) – 4 of 4



To select an ID number via the keypad:

1. Press the Private Call button.
The last number dialed or received is displayed.
2. Use the keypad to enter the ID number you want.
3. Press and release the PTT button to start the Private Call.
The called ID is momentarily displayed, then you see PLEASE WAIT. When you are connected, you see the called ID again.
4. Press and hold the PTT button to talk; release it to listen.
5. Press the Home button or Private Call Button to hang up and return to the home display.

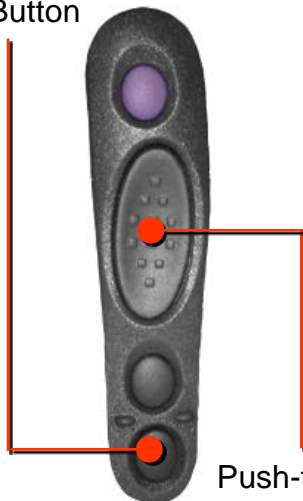


Private Conversation Call – Respond (Side Button 2)





LED

Private Call
Button



Push-to-Talk
(PTT)



 ***When a Private Call is received, you hear two alert tones, the LED flashes green, the call received symbol () flashes and CALL RECEIVD is displayed, followed by the calling name or ID, followed by your home talkgroup each for about 2 seconds. This repeats until the call is answered.***

To respond to a Private Conversation call:

1. Press the Private Call Button .
2. Press and hold the PTT button to talk; release it to listen.
3. Press the Home button or the Private Call Button to hang up and return to the home display.



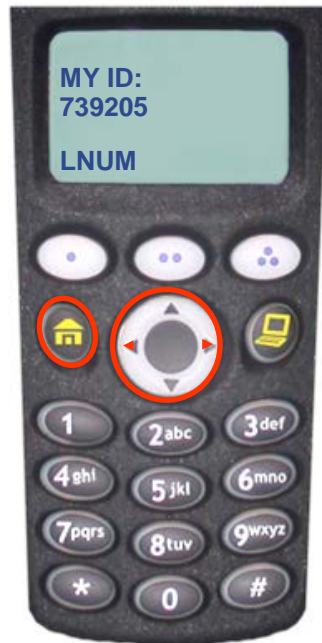
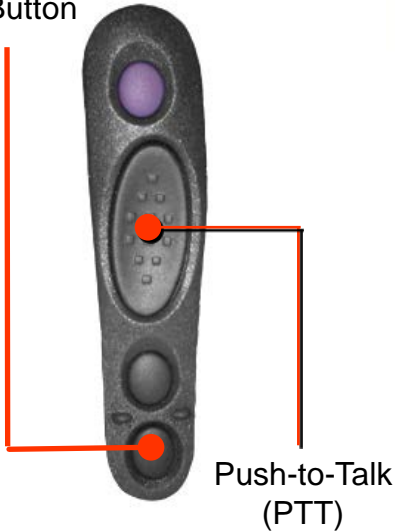
ID Number (View Your) (Side Button 2)



To view your ID number:

1. Press the PRIVATE CALL button.
2. Press the left side of the 4-way Navigation button to find your ID.
3. Press the Home button, or PRIVATE CALL button to return to the home display.

Private Call
Button



MENU/ KEYPAD



Clock (Time and Date) (Menu) – 1 of 2



Using this special feature, you can program the time and date as you might with other electronic devices. The clock display is enabled by a qualified radio technician.

To edit the time and date:

1. Press the right side of the 4-way Navigation button until CLCK is displayed.
2. Press the button directly below CLCK.
The current setting is displayed.
3. Press the button directly below EDIT.
The first item flashes.

Continued...



Clock (Time and Date) (Menu) – 2 of 2



4. Press the up or down arrow of the 4-way Navigation button to change the selected item.

Note: Press the Home button at any time to return to the home display without saving your changes.

OR

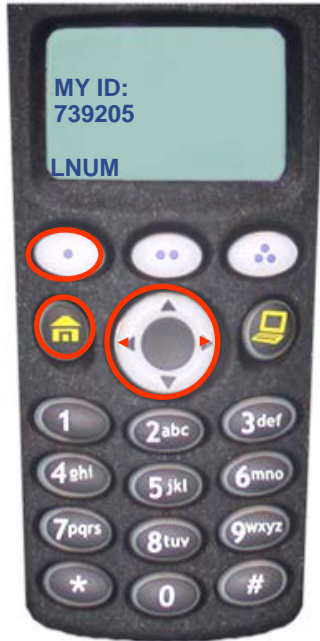
Press the right side of the 4-way Navigation button to move to an item you wish to change.

5. Press the up or down arrow of the 4-way Navigation button to change the selected item.
6. Press the right side of the 4-way Navigation button one or more times to move to an item in the date field.
7. Press the up or down arrow of the 4-way Navigation button to change the selected item.
8. When you have made all of your changes, press the button directly below SAVE to save your changes and return to the home display.

Note: If a call arrives while the radio is in the clock-setting menu, the radio exits clock setting, your changes are lost, and the call information is displayed.



ID Number (View Your) Using PAGE (Menu)

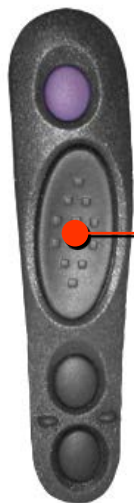


To view your ID number:

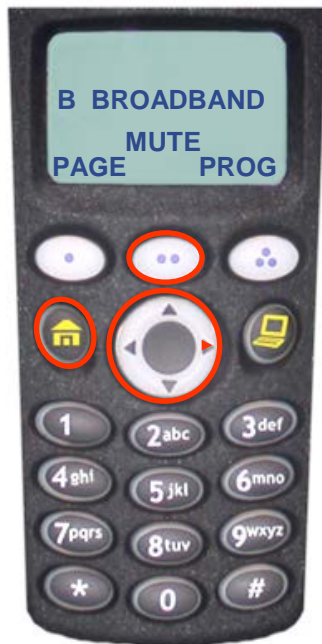
1. Press the button directly below PAGE.
2. Press the left side of the 4-way Navigation button to find your ID.
3. Press the Home button to return to the home display.



Keypad Tones (Mute or Unmute) (Menu)



Push-to-Talk
(PTT)



To turn the keypad tones on or off:

1. Press the button directly below MUTE.
The current state is shown: TONES OFF or TONES ON.

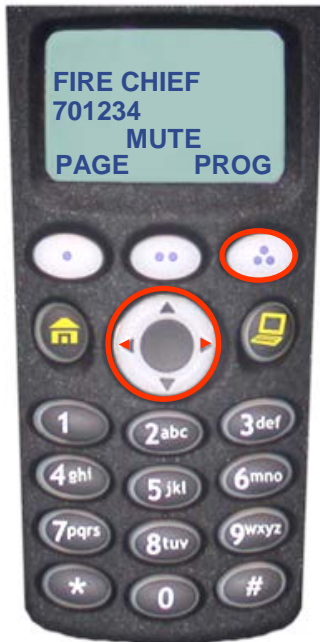
3. Press the button directly below OFF or ON.

Note: Press the Home or the PTT button to exit without changing the setting.

Note: Turning off keypad tones does not affect any other tones.



List Name Edit Call, Page, or Phone (Menu) – 1 of 2



You can use lists to store frequently used numbers and associate them with names.

To edit a list name:

1. Press the button directly below PROG

You see the lists that can be changed.

3. Press the button directly below the name of the list you wish to change.

You see the first list member and the view/program () symbol flashing, indicating the programming mode. You will also see NUM and NAME displayed as possible selections.

4. Press the left or right side of the 4-way Navigation button to select the list member to be changed.

OR

Use the keypad to enter the corresponding location number of the name in the list.

Continued...



List Name Edit Call, Page, or Phone (Menu) – 2 of 2



5. Press the button directly below NAME.

The blinking cursor shows the location of the character to be added.

6. Press the left side of the 4-way Navigation button to erase characters.

If you erase the entire name and press either the left or right side of the 4-way Navigation button, you exit editing without saving your changes.

7. Press a keypad button to add a character.

8. Press the button directly below SAVE to save your changes. Return to step 4 to make more changes.

OR

Press the Home button to return to the home display.



List Number Edit Call, Page, or Phone (Menu) – 1 of 2



You can use lists to store frequently used numbers and associate them with names.

To edit a list number:

1. Press the button directly below PROG

You see the lists that can be changed.

3. Press the button directly below the name of the list you wish to change.

You see the first list member and the view/program () symbol flashing, indicating the programming mode. You will also see NUM and NAME displayed as possible selections.

4. Press the left or right side of the 4-way Navigation button to select the list member to be changed.

OR

Use the keypad to enter the corresponding location number of the name in the list.

Continued...



List Number Edit Call, Page, or Phone (Menu) – 2 of 2



5. Press the button directly below NUM.

The blinking cursor shows location of the number to be added.

6. Press the left side of the 4-way Navigation button to erase numbers.

If you erase the entire number and press either the left or right side of the 4-way Navigation button, you exit editing without saving your changes.

7. Press a keypad button to add a number.

8. Press the button directly below SAVE to save your change. Return to step 4 to make more changes.

OR

Press the Home button to return to the home display.



List View (Menu)- 1 of 2



You can use lists to store frequently used numbers and associate them with names. There are three list types: call, page, phone.

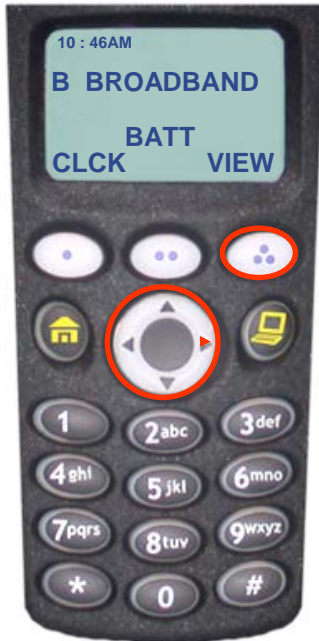
To view a list:

1. Press PVT CALL, PHONE or PAGE button to get LIST displayed.
2. Press the button directly below LIST.
3. Press the left or right side of the 4-way Navigation button to view the names on the list.
4. Press the Home button to exit.

[Continued...](#)



List View (Menu)- 2 of 2

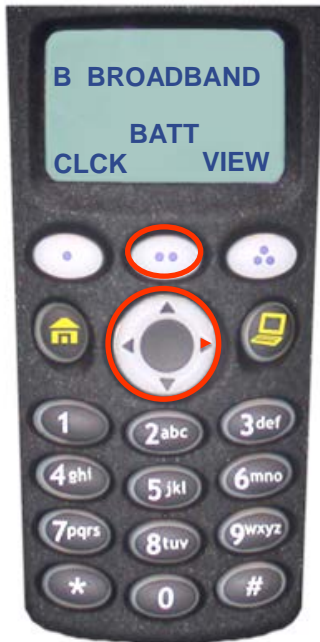


To view lists:

1. Press the right side of the 4-way Navigation button until VIEW is displayed.
2. Press the button directly below VIEW.
PHONE, CALL and PAGE are displayed. Press the button below the one you want.
3. Press the right side of the 4-way Navigation button to scroll through the list.
4. Press the Home button to exit.



Smart Battery (Menu)



This feature allows you to view the condition of your Smart Battery.

To access information about your battery:

1. Press the right side of the 4-way Navigation button until BATT is displayed.
2. Press the button directly below BATT.

3. Battery data is displayed as follows:

RATED CAPACITY% indicates the current charge (% of rated capacity) on the battery.

EST CHGS indicates the estimated number of charges performed on the battery.

Note: If a Smart Battery is not powering your radio, the display will read SMART BATT DATA NOT AVAILABLE.



Thank you for your attention!



For reference, see the XTS2500 user manual on our website.

Go to: www.telecom.msu.edu.

Click: Support; Training; Two-Way Radio, and then
Motorola XTS2500



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